**Mobile Learning in Developing Countries: Bridging the Digital Divide**

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**Introduction**

Imagine learning anything, anytime, anywhere – that's the power of mobile learning! It lets you access educational content and activities through your phone, making studies more flexible and convenient. This is especially beneficial in developing countries, where traditional classrooms might face disruptions due to weather or unforeseen events.

A study by Biswas et al. (2020) in Bangladesh found that mobile learning was a valuable tool for university students during the COVID-19 pandemic. With proper planning for internet access and logistics, mobile learning can ensure educational continuity even in challenging situations.

While the digital divide, a stark contrast between those with and without access to information and communication technologies (ICT), remains a significant challenge in developing countries, mobile learning can help mitigate its effects. By offering a more accessible and flexible learning option, it can reduce the disparities in educational opportunities.

Research by Mathrani et al. (2022) highlights the various forms of this digital divide. They found not only a gap between those with and without internet access, but also a "gendered sub-divide". This means that girls, due to social and family structures, might face additional challenges like household chores that limit their time and ability to use mobile learning effectively. While boys also experience difficulties, the study suggests these tend to be more technical in nature.

Despite these challenges, mobile learning holds promise in bridging the digital divide. A study by Fabito et al. (2021) explores this potential. While limitations like internet connectivity and access to computers exist, they suggest mobile apps can offer functionalities similar to those found on laptops and desktops. These apps, designed for specific subjects like programming, could be a valuable resource for students without traditional computing equipment.

This research paper aims to investigate the effectiveness of mobile learning in bridging the digital divide in developing countries. We will examine the challenges and opportunities this technology presents and explore its potential to provide equitable access to education for all.

**Research Questions**

1. What is the demographic profile of the participants according to:
   1. Age
   2. Sex
   3. Religion
   4. College enrolled in
2. What are the perceived benefits and drawbacks of mobile learning as reported by the participants?
3. How do participants rate the effectiveness of mobile learning in bridging the digital divide?

**Methods**

This study will employ a quantitative-descriptive research design to explore college students' perceptions of mobile learning as a tool for bridging the digital divide in developing countries, with a focus on ZPPSU. A random sampling technique will be employed to select participants, ensuring a diverse and representative sample of students. The sample will include 100 students (33%) from the College of Information and Computing Studies (CICS) and 78 students (26%) from the College of Teacher Education (CTE), among others.

Data will be collected through a survey questionnaire composed of three parts. Part 1 will gather demographic information such as age, gender, religion, and the college in which they are enrolled. Part 2, based on an adapted questionnaire from Biswas et al. (2021), will examine participants' perceptions of the benefits and drawbacks of mobile learning. Part 3 will focus on the perceived effectiveness of mobile learning in bridging the digital divide.

The survey will utilize a 5-point Likert scale, ranging from Strongly Agree to Strongly Disagree. Participants will rate 10 statements about their perceptions of mobile learning’s benefits, with ratings from 1 to 5 (5 being the highest level of agreement). Additionally, 10 statements about the effectiveness of mobile learning in bridging the digital divide will be rated similarly to indicate the strength of beliefs about mobile learning’s impact on the digital divide.

**Questionnaire**

Part 1: Demographic Profile

Age: [ ] Below 18      [ ] 18-20      [ ] Above 20

Gender: [ ] Male      [ ] Female      [ ] Prefer not to say

Religion: [ ] Catholic      [ ] Muslim      [ ] Christian (non-Catholic)      [ ] Other: \_\_\_\_\_\_\_

College Enrolled In: [ ] CICS      [ ] CTE      [ ] Other: \_\_\_\_\_\_\_

Do you own a laptop or desktop? [ ] Yes      [ ] No

Mobile Device Owned: [ ] Smartphone      [ ] Basic Mobile Phone      [ ] Tablet      [ ] None

Type of Connection Used: [ ] Mobile Data      [ ] Wi-Fi      [ ] Broadband      [ ] None

Part 2: Perceived benefits and drawbacks of mobile learning

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Statement | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
| The use of mobile is flexible to learn anytime, anywhere | 1 | 2 | 3 | 4 | 5 |
| Mobile learning is a good idea to minimize the study gap during covid-19 pandemic time | 1 | 2 | 3 | 4 | 5 |
| Mobile is easier to find relevant information of my studies | 1 | 2 | 3 | 4 | 5 |
| Mobile learning helps to improve my study skills | 1 | 2 | 3 | 4 | 5 |
| Mobile is easier to access to find my study materials | 1 | 2 | 3 | 4 | 5 |
| Mobile is easier to share in class-related discussions both online and offline during covid-19 period | 1 | 2 | 3 | 4 | 5 |
| The use of mobile helps to improve knowledge in my field of study | 1 | 2 | 3 | 4 | 5 |
| Mobile learning helps to enhance my motivation to finish my studies during this pandemic time | 1 | 2 | 3 | 4 | 5 |
| Mobile helps me to solve study related problem | 1 | 2 | 3 | 4 | 5 |
| Mobile learning helps me to learn different ways and provide various learning fields | 1 | 2 | 3 | 4 | 5 |

Part 3: Effectiveness of mobile learning in bridging the digital divide

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Statement | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
| **Mobile learning has made educational resources more accessible to underserved communities.** | 1 | 2 | 3 | 4 | 5 |
| **Mobile learning reduces barriers to education for people in remote areas.** | 1 | 2 | 3 | 4 | 5 |
| **The use of mobile devices in education has improved learning opportunities for those with limited access to traditional medium.** | 1 | 2 | 3 | 4 | 5 |
| **Mobile learning platforms are effective in providing relevant educational content to various communities.** | 1 | 2 | 3 | 4 | 5 |
| **Mobile learning can significantly enhance digital skills among people with fewer opportunities.** | 1 | 2 | 3 | 4 | 5 |
| **The flexibility of mobile learning helps to accommodate the varied schedules of learners in challenging situations.** | 1 | 2 | 3 | 4 | 5 |
| **Mobile learning initiatives have contributed to reducing the gap in educational achievement between different income groups.** | 1 | 2 | 3 | 4 | 5 |
| **I believe that mobile technology plays a crucial role in connecting learners with teachers and educational materials.** | 1 | 2 | 3 | 4 | 5 |
| **The affordability of mobile devices has positively impacted access to education for low-income individuals.** | 1 | 2 | 3 | 4 | 5 |
| **Mobile learning enhances teamwork and knowledge-sharing among learners from different backgrounds.** | 1 | 2 | 3 | 4 | 5 |

**References**

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